

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Washington Headquarters Service, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188) Washington, DC 20503.

PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.

1. REPORT DATE (DD-MM-YYYY) 14-12-2000		2. REPORT DATE TYPE Final Progress		3. DATES COVERED (From - To) May 1, 2000 to Sept 14, 2000	
4. TITLE AND SUBTITLE Ocean Studies Board Core Supports				5a. CONTRACT NUMBER	
				5b. GRANT NUMBER N00014-92-J-1636	
				5c. PROGRAM ELEMENT NUMBER	
6. AUTHOR(S) OSB Board Director - Morgan Gopnik				5d. PROJECT NUMBER	
				5e. TASK NUMBER	
				5f. WORK UNIT NUMBER	
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) National Research Council Ocean Studies Board 2101 Constitution Ave, NW Washington, DC 20418				8. PERFORMING ORGANIZATION REPORT NUMBER	
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) Office of Naval Research Ballston Centre Tower One 800 North Quincy Street Arlington, VA 22217-5660				10. SPONSOR/MONITOR'S ACRONYM(S) ONR	
				11. SPONSORING/MONITORING AGENCY REPORT NUMBER	
12. DISTRIBUTION AVAILABILITY STATEMENT No limitations or restrictions on distribution of OSB Reports					
13. SUPPLEMENTARY NOTES					
14. ABSTRACT This grant provided partial Core Support to the Ocean Studies Board. Annual Reports were provided to ONR. The attached final progress report includes a listing of all reports by OSB Committees and the Board from May 1992 through November 2000.					
15. SUBJECT TERMS Ocean Studies					
16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE			Morgan Gopnik
U	U	U	UU	4	19b. TELEPHONE NUMBER (include area code) (202) 334-2714

20001218 088

**NATIONAL RESEARCH COUNCIL
COMMISSION ON GEOSCIENCES, ENVIRONMENT, AND
RESOURCES
OCEAN STUDIES BOARD
2101 Constitution Ave., NW
Washington, DC 20418**

Grant number: N00014-92-J-1636

Title: Ocean Studies Board, Core Support

Final Performance Report

Period Covered – 05/1/1992 - 09/14/2000

Responsible Staff Officer: Morgan Gopnik

Date: December 14, 2000

DISTRIBUTION STATEMENT A
Approved for Public Release
Distribution Unlimited

Section I - Purpose and Scope

The Ocean Studies Board (OSB) serves as a focal point within the NRC to advise the Federal Government on matters of ocean science and policy. The OSB conducts studies in the following areas: fundamental science, the status of marine and coastal ecosystems, the ocean's role in the global climate system, ocean related aspects of national security, fisheries and other marine resources, ocean science education, reviews of specific agency programs, and the future of ocean sciences. The OSB is a multidisciplinary body with representation from the fields of marine biology, biological, chemical, and physical oceanography, marine geology and geophysics, fisheries science, social science, engineering, and marine policy. The OSB continues to provide guidance on major ocean science and policy issues to ONR.

In addition to providing overall OSB Core support, this grant also provided support to the 1995 Ad Hoc project *"Expanding the Uses of Naval Ocean Sciences and Technology"* and the 1995 Tactical Oceanography Symposium *"Littoral Meteorology and Oceanography"*. The grant also provided support in 1998 to the Beyond Discovery activity *"The Path from Research to Human Benefit: Underwater Acoustics"*. In 1999, ONR began contributing to the new Engineering and Technology Subcommittee and to the annual Roger Revelle Commemorative Lecture.

Section II - Description of Overall Progress

OSB activities from March 1, 1992 through September 14, 2000 included three (3) meetings a year of the board and numerous meetings of its study committees. The OSB chair, director, board members, and committee chairs spoke at a number of meetings and conferences throughout the period to explain the role of the board and publicize the study results.

In the reporting period, the board issued six annual reports and oversaw the production of others based on the work of appointed study committees. The findings and recommendations in these reports made significant contributions to science and public policy. The reports included:

1992:

- *A Review of the Ocean Drilling Program Long Range Plan*
- *Oceanography in the Next Decade: Building New Partnerships*
- *Symposium on Naval Warfare and Coastal Oceanography*

1993:

- *Applications of Analytical Chemistry to Oceanic Carbon Cycle Studies*
- *Research Opportunities in Ocean Acoustics*

- *Research Opportunities in Mesoscale and Large-Scale Physical Oceanography*
- *Research Opportunities in Remote Sensing*
- *Research Opportunities in Oceanic Biology*
- *Research Opportunities in Marine Geology and Geophysics for ONR Programs*
- *Research Opportunities in Oceanic Chemistry for ONR Programs*
- *Research Opportunities in Coastal Sciences for ONR Programs*
- *Research Opportunities in Marine Meteorology for ONR Programs*

1994:

- *The Ocean's Role in Global Change: Progress of Major Research Programs*
- *Low-Frequency Sound and Marine Mammals: Current Knowledge and Research Needs*
- *Proceedings of the Symposium on Coastal Oceanography and Littoral Warfare*
- *Improving the Management of U.S. Marine Fisheries*
- *Molecular Biology in Marine Science: Scientific Questions, Technological Approaches, and Practical Implications*
- *A Review of the NOAA National Sea Grant College Program*
- *Applications of Analytical Chemistry to Oceanic Carbon Cycles - Letter Report*
- *An Assessment of Atlantic Bluefin Tuna*
- *Review of U.S. Planning for the Global Ocean Observing System*
- *Proceedings of a Workshop on Biological Diversity in Marine Systems*
- *Priorities for Coastal Ecosystem Science*
- *A Review of the Accomplishments and Plans of the NOAA Coastal Ocean Program*

1995:

- *Understanding Marine Biodiversity: A Research Agenda for the Nation*
- *Arctic Ocean Research and Supporting Facilities: National Needs and Goals*
- *Science, Policy, and the Coast: Improving Decisionmaking*
- *Improving Interactions Between Coastal Science and Policy: Proceedings of the California Symposium*
- *Improving Interactions Between Coastal Science and Policy: Proceedings of the Gulf of Maine Symposium*
- *Improving Interactions Between Coastal Science and Policy: Proceedings of the Gulf of Mexico Symposium*

1996:

- *Proceedings of the Symposium on Tactical Meteorology and Oceanography Support for Strike Warfare and Ship Self-Defense*
- *Expanding the Uses of Naval Ocean Science and Technology*
- *Marine Mammals and Low-Frequency Sound: Progress Since 1994 - An Interim Report*

1997:

- *The Global Ocean Observing System: Users, Benefits, and Priorities*
- *Oceanography and Naval Special Warfare: Opportunities and Challenges*
- *National Academy of Sciences Colloquium: Carbon Dioxide and Climate Change*

1998:

- *Review of Northeast Fishery Stock Assessments*
- *Improving Fish Stock Assessments*
- *Opportunities in Ocean Sciences: Challenges on The Horizon*

1999:

- *Sustaining Marine Fisheries*
- *Global Ocean Sciences: Toward an Integrated Approach*
- *The Community Development Quota Program in Alaska and Lessons for the Western Pacific*
- *Sharing the Fish: Toward a National Policy on Individual Fishing Quotas*
- *From Monsoons to Microbes: Understanding the Ocean's Role in Human Health*
- *Science for Decisionmaking: Coastal and Marine Geology at the USGS*

2000:

- *Clean Coastal Waters: Understanding and Reducing the Effects of Nutrient Pollution*
- *Oceanography and Mine Warfare*
- *Improving the Collection, Management, and Use of Marine Fisheries Data*
- *Marine Mammals and Low-Frequency Sound: Progress Since 1994*
- *Bridging Boundaries Through Regional Marine Research*
- *Fifty Years of Ocean Discovery: National Science Foundation, 1950-2000*
- *Building Ocean Science Partnerships: The United States and Mexico Working Together*
- *Illuminating the Hidden Planet: The Future of Seafloor Observatory Science*

Section III - Description of Current Performance

Ongoing project activities include:

- *Marine Protected Areas: Tools for Sustaining Ocean Ecosystems* - Released November 2000

- *Recruiting Fishery Scientists: Workshop on Stock Assessment and Social Science Careers* - Released November 2000
- *Abrupt Climate Change: Implications for Science and Public Policy*
- *Oil in the Sea: Inputs, Fates, and Effects (Joint with MB and BEST)*
- *Effects of Bottom Trawling on Seafloor Habitats*
- *Environmental Information for Naval Use*
- *Potential Impacts of Ambient Noise in the Ocean on Marine Mammals*
- *Review of the Florida Keys Carrying Capacity Study (Joint with WSTB)*
- *Spills of Emulsified Fuels: Risks and Response (Joint with MB)*
- *Moving Remote Sensing from Research to Application (Joint with the SSB)*
- *Environmental Windows for Dredging (Joint with MB and TRB)*
- *Roger Revelle Lecture Series*
- *U.S. National Committee to the Scientific Committee on Oceanic Research (SCOR)*

Section IV - Planning Schedule

Current activities under development for the coming year include:

- *Reference Standards for Ocean Sciences*
- *The Status and Future of Atlantic Salmon in Maine (Joint with BEST)*
- *Review of NASA's Oceanography Program*
- *The Alaska Groundfish Fishery and Steller Sea Lions*
- *Sustaining Northern Alaska's Salmon Fisheries (Joint with BEST)*
- *Gas Hydrates in the Marine Environment*
- *Carbon Sequestration*
- *Uncertainty in Marine Science Models Used in the Ocean Sciences*
- *Scientific Basis for Determining Ecological Effects of Aquaculture Biotechnology (Joint with BB)*